OPERATIONAL RULES

1. We would like to develop Operational Rules using the following guiding principles:

   - The rule will be designed as Performance Standards
   - The rule will be based on Best Management Practices for operation and maintenance of public water systems
   - The rule will be designed to protect public health
   - Specific requirements will be tailored to the size and complexity of the system
   - The rule will minimize or avoid additional paperwork for systems and IDEM
   - The rule will not be a Permitting Program

2. Topics for discussion

   a) Definitions
   Hold off on this until later date
   Define the following
   Critical parts

   b) Operation
   - Who is involved what type of systems
   - Breakdown of systems
   - How to break them down

      1. TNC, NTNC, Communities
      2. Population
      3. Seasonal vs. Annual
      4. Source Water ***T***ype
         Surface (reference federal surface water rule)
         GWUDI
         Ground
            Treatment
            No treatment
         Purchase
            Treatment
            No treatment
      5. Complexity
         Distribution
         Storage
      6. Volume
      7. Make general statement

   c) Maintenance - General

   - General Requirements
   - Required Supervision
      Notification of owners, certified operators

- Chemical Addition
    Chemicals being added approved
- When construction permits are required
    Replacement of items such as pressure tanks
- Maintenance Program (Ask Group do we want maintenance to be after each section or under a general heading)
- To be written by plant and IDEM reviews on inspection visits
- Program to contain
    Maintenance Process
    Maintain Schedules
    Manufactures suggested instruction
    System inventory
        Pipe size location
- Exception for Water Systems
    Small systems have checklist instead of O&M Manual
- ***Critical Parts on hand***
- ***List of vendors for repairs***

~~d)~~ Maintenance – ~~Individual~~ **By Facility Classification**

- Distribution Systems
    - Metering
        Meter placement on service line
        Meter Pits
    - Types of meters
        Flow Meters
        Customers
    - Pressure Requirements
        Minimum amount of pressure
    - Replacement locations
        Replace to current standards
    - Location not the same as old lines deals with relocation
    - ***Depth of service lines***
    - Sample Site Plan
        Current map
        How often do you want to change
    - Dead Ends

    - Hydrants
        Flushing
        Drains
    - Valves exercises
    - ~~Leak Detection~~ ***Water Audits***
    - ***Backflow preventers***
    - ***Booster Stations***

- Source

- **Location of source**
- Wells
    Pumping tests
        How often
    Static Water Levels
    Well logs
    Cleaning reports

- Surface
    Intake structure
        As built drawings
- ***Raw Water Lines***
- ***Wellhead/Source Water Protection***
- ***Security of source***
    What should be on Web site?
- ***Emergency Response***

➢ ~~Pumps~~ ***Pumps/Control Valves***
- Lubrication
    Type of lubrication
    How often
- High Service
    Testing
- Booster
    Testing, type, capacity
- ***Pump setting***
- ***Pumps shutoff***
    Valve
    Pressure side

➢ Chemical Treatment
- Feed equipment
    Replacement parts on hand
- ***Where does storm piping go?***
- Storage and handling
    Safety handling
    Safety handling plans reference from different rules (i.e. air)
    Operator Safety might reference other rules
- Chlorination
    Mandate continuous chlorination
    Testing
    Minimum Contact Time
    Residual requirements Free/Total
    Distribution Residual
        not less than 0.25 mg/l free chlorine
        not less than 1mg/l total chlorine

Plant Residual
Chlorine Operation Records
How long should they keep records
Exemptions from Chlorination
What systems are not required to chlorinate (Ground Water Rules may dictated Chlorination)
Revocation of Exemption of Chlorination

- ***Disinfection***
- ***Back up Disinfection***
- ***Other Chemical being added (i.e. Phosphate)***
- ***General Statement on maintenance of equipment per manuals***
- ***Effect of oxidants on equipment***
- ***Required NSF Requirements***
- ***Direct/Indirect Additives Rules***

- Operation and Maintenance of Treatment Unit
  - Filtration
    - ***Filter gauge***
    - ***Depth of media***
    - ***Backwash Turbidity***
    - ***Media age***
    - ***Recharge***
    - ***Type of Media***
    - ***Backwash waste***
  - Aeration
    - ***inspection time***
  - ***Flashmix***
  - ***Flocculation***
  - ***Clearwell***
    - ***Residual level in clearwell***
  - ***Electrical (Blackboxes)***
    - ***Dehumidifiers***
    - ***Motors***
- ***Taking off line requirements and putting back on line***
  - ***take plant off line who to notify and how to notify***
- ***Separation distance between chemical feeds***
- ***Residual Management***
  - ***Iron Sludge***

e) Secondary Standards and Aesthetics ***(Is this section necessary)***

- Color
- Odor
- Taste
- ***Hardness***

- ***Define minimal level of testing in this area***
- ***What are EPA requirements if exceeded?***

f) Operational Testing

- Digital equipment
- ***General Category***
- ***Frequency***
- ***Types of Treatment***
- ***Filtration Preferred***
- ***SCADA System***
- ***Monitoring***

g) Reporting Requirements

- MRO's
  Who is required to submit
  What would it be (type of submittal make sense no more paperwork)
  If chemical is added we want to see it
  Ask workgroup
  What would be the best indicator for performance of the facility
  Add last months or last years averages on report
- Submittal time frame
  Weekly
  Monthly
  Annual
- Measurement of the following
  e.g. flow, chemical doses, observations, backwashing time, disinfection residuals
- ***Record Maintenance***
  How long to maintain and keep documents

h) Storage

- ***Inspection Frequency***
- ***Dechlorination Station***
- ***Turnover of water in tank (rechloriantion)***
- ***Corrosion Control***
- ***Security***
- ***Control Access***
- Towers
  Overflow line
  Screens
  Location of line
  Evaluation of repairing
- Pressure/Hydro-Pneumatic Tanks
  Location

Pressure relief
Volumes of Tank
ASTME Standard
Pressure Vessel Relief Board Regulations
Valve maintenance
Frequency of inspection
Screens
Internal tanks

- Amount required
  How much water is available for emergency situations
  Site specific
- Clearwells
  ~~Type of containment~~
  Baffling
  - Ground
  - Control Valves
  - ***Access Control***
    Covered or uncovered

i) Cross Connection
   - ***Cross Connection Regulations (327 IAC 8-10)***
   -Water Loading Stations
   Identification of loading station
   Water Haulers

j) Repair Work and Emergency Operation

- Protection during Repair Work
  Protecting the water from contamination
- Disinfection Following Repair or Replacement
  Handling of waste from disinfecting
  Dechlorination Agents
- How to notify State
- Copy of repair schedules
- Sampling Requirements
  Number of samples determined according population involved
  Test needed to be performed if line breaks
- Emergency Operation
  Boil Orders
  Notification of agency
  Emergency/Contingency Plan
  Auxiliary power
  Public Notification
  Purpose
  Why notify
  Public Concern (frightened)
  Responsibility

Who is responsible
Requirement
What type of language
How to notify
Person to be notified

k) Life expectancy of Treatment Plant

l) ***Surface Water Treatment Rule***

m) Other Discussion Topics:

- Follow up of Sanitary Survey deficiencies identified by IDEM
- Maintaining compliance with Permit and Rule requirement
Maintenance of or control of sanitary setback area
- The facility shall maintain adequate technical, managerial and financial personnel ***and resources*** to operate system.
- ***Spell out responsibility for compliance of the system owners (Town Boards and system operators)***
- Bond requirement for delinquent systems
- Operators caught in the middle between rule and governing body